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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,823

05/03/2005

Shiro Ogata

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27885

7590

07/10/2008

FAY SHARPE LLP

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EXAMINER

AUSTIN, AARON

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,823	Applicant(s) OGATA ET AL.	
	Examiner AARON S. AUSTIN	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Oishi et al. (US 5,935,717).

Oishi et al. teach a titania-metal composite containing titanium oxide and a metal such as copper (Cu) (column 4, lines 20-26).

Oishi et al. do not specify that the product has non-photocatalytic properties.

However, the presence of Cu is expected to suppress the photocatalytic activity of the anatase-type or rutile-type composite in the same manner taught by Applicant as producing the claimed non-photocatalytic property in non-amorphous titania-metal

composites (present specification at page 5, lines 1-11). Therefore, as like materials are used and formed in a like manner to that claimed and taught by Applicant, the product taught by Oishi et al. is expected to display non-photocatalytic properties as claimed.

Claim 1 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Murasawa et al. (US 2001/0046937).

Murasawa et al. teach a titania-metal composite containing titanium oxide and a metal such as copper, nickel, cobalt, iron, or zinc (paragraph [0013] and claim 12).

Murasawa et al. teach the presence of photocatalytic properties and does not specify that the product has any non-photocatalytic properties.

However, the presence of copper, nickel, cobalt, iron, or zinc is expected to suppress the photocatalytic activity of the composite in the same manner taught by Applicant as producing the claimed non-photocatalytic property in non-amorphous titania-metal composites (present specification at page 5, lines 1-11). Therefore, as like materials are used and formed in a like manner to that claimed and taught by Applicant, the product taught by Murasawa et al. is expected to display non-photocatalytic properties as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as obvious over Ogata (US 6,099,969) in view of Oishi et al. (US 5,935,717).

Ogata teaches a film-forming titania-metal composite comprising non-photocatalytic amorphous titanium peroxide (claims 1 and 5).

Ogata et al. do not appear to teach the inclusion of a material such as copper, manganese, nickel, cobalt, iron, zinc, or a compound thereof.

Oishi et al. teach addition of a metal such as copper to a titanium oxide film as a catalyst for enhancing the antibacterial and cleaning effects (column 4, lines 16-34). Therefore, as Oishi et al. clearly teach the addition of copper provides the advantage of increasing the antibacterial and cleaning effects of a titanium oxide coating, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include copper in the non-photocatalytic titanium oxide coating of Ogata et al., particularly should any of the coating be converted to anatase-type or included with an anatase-type having photocatalytic properties (column 3, lines 41-53 and column 5, lines 41-50).

Claims 1-2 are rejected under 35 U.S.C. 103(a) as obvious over Ogata (US 6,099,969) in view of Murasawa et al. (US 2001/0046937).

Ogata teaches a film-forming titania-metal composite comprising non-photocatalytic amorphous titanium peroxide (claims 1 and 5).

Ogata et al. do not appear to teach the inclusion of a material such as copper, manganese, nickel, cobalt, iron, zinc, or a compound thereof.

Murasawa et al. teach addition of a metal such as copper, nickel, cobalt, iron, or zinc to a titanium oxide film as a catalyst for enhancing the antibacterial and cleaning effects (paragraph [0013] and claim 12). Therefore, as Murasawa et al. clearly teach the addition of such a metal provides the advantage of increasing the effectiveness of a titanium oxide coating, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include a metal such as copper, nickel, cobalt, iron, or zinc in the non-photocatalytic titanium oxide coating of Ogata et al., particularly should any of the coating be converted to anatase-type or included with an anatase-type having photocatalytic properties (column 3, lines 41-53 and column 5, lines 41-50).

Claim 2 is rejected under 35 U.S.C. 103(a) as obvious over Oishi et al. (US 5,935,717) in view of Ogata (US 6,099,969).

Oishi et al. teach a titania-metal composite as described above.

Oishi et al. do not specify that the titanium oxide is modified with a peroxy group.

Ogata teaches use of a titanium peroxide as the anatase or amorphous titanium oxide in a protective coating (column 3, lines 7-20 and 47-53). Therefore, as Ogata

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clearly teaches a titanium peroxide is a suitable form of titanium oxide for use in a protective coating and provides the advantage of ultraviolet screening properties, electromagnetic screening properties, resistance to chemicals (column 3, lines 1-6), it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to use titanium peroxide as the titanium oxide of Oishi et al.

Claim 2 is rejected under 35 U.S.C. 103(a) as obvious over Murasawa et al. (US 2001/0046937) in view of Ogata (US 6,099,969).

Murasawa et al. teach a titania-metal composite as described above.

Murasawa et al. do not specify that the titanium oxide is modified with a peroxy group.

Ogata teaches use of a titanium peroxide as the anatase or amorphous titanium oxide in a protective coating (column 3, lines 7-20 and 47-53). Therefore, as Ogata clearly teaches a titanium peroxide is a suitable form of titanium oxide for use in a protective coating and provides the advantage of ultraviolet screening properties, electromagnetic screening properties, resistance to chemicals (column 3, lines 1-6), it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to use titanium peroxide as the titanium oxide of Murasawa et al.

Response to Arguments

Applicant's arguments, see the Remarks, filed 4/11/08, with respect to the rejections over Ogata et al. (JP 2002-212463A) have been fully considered and are persuasive. These rejections have been withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON S. AUSTIN whose telephone number is (571)272-8935. The examiner can normally be reached on Monday-Friday: 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John J. Zimmerman/
Primary Examiner, Art Unit 1794

/Aaron Austin/